RoVal
8931-C MAISLIN DRIVE, TAMPA, FL 33637

FOR 24 HOUR EMERGENCY: CALL CHEMTEL 1-800-255-3924
FOR INFORMATION: (813) 988-4910
C.A.S. NO.: Mixture Proprietary
REVISION DATE: May 7, 2003

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

TRADE NAME: Step 1 Terrazzo Heavy Duty Cleaner/Wax Remover
DOT SHIPPING NAME: Potassium Hydroxide Solution
DOT/UN ID NO.: UN 1814
DOT CLASS: 8
LABEL REQUIRED: Corrosive
PACKING GROUP: III

2. INFORMATION ON HAZARDOUS INGREDIENTS

MATERIAL	C.A.S. NO.	% BY WT.	PEL	TLV
Potassium Hydroxide	1310-58-3	4.04	2 mg/m^3	2 mg/m^3
2 Butoxyethanol	111-76-2	2.39	25 ppm	25 ppm

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Avoid contact with amphoteric metals (e.g. aluminum, copper and zinc), halogenated hydrocarbons, inorganic acids and organic acids. Contact with water can generate heat, cause violent splashing and splattering. Contact with some metals can generate explosive hydrogen gas.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Causes burns.

SKIN CONTACT: Causes burns.

INHALATION: Can cause mild irritation to serious respiratory tract damage and severe pneumonitis.

INGESTION: Not expected in industrial use.

ACUTE EFFECTS OF EXPOSURE: Refer to routes of exposure above.

CHRONIC EFFECTS OF EXPOSURE: Prolonged contact with dilute solutions or dust has a destructive effect on tissue. There is no data available, which address medical conditions, which are generally recognized as being aggravated by exposure to this product.

This material does not contain any ingredient listed by IARC, NTP or OSHA as carcinogens in amounts exceeding 0.1%.

4. FIRST AID MEASURES

SKIN: Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician if irritation persists.

EYE: Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

INGESTION: If swallowed, DO NOT induce vomiting. Keep person warm and quiet and obtain immediate medical attention. If conscious, give large quantities of water or milk. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Keep person warm and quiet. Call a physician immediately.

5. FIRE FIGHTING MEASURES

FLASH POINT: Non combustible

FLAMMABLE LIMITS: (% Volume in Air) UPPER: None LOWER: None

EXTINGUISHING MEDIA: Use standard fire fighting techniques to extinguish fires involving this material: use water spray, dry chemicals or carbon dioxide.
SPECIAL FIRE FIGHTING PROCEDURE: Prevent human exposure to fire, fumes, smoke and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus (SCBA)and impervious protective clothing.
Use water to cool containers exposed to fire.
UNUSUAL FIRE EXPLOSION HAZARD: Product will react violently with many organic chemicals, especially nitrocarbons and chlorocarbons. Potassium hydroxide reacts with zinc, aluminum and other active metals producing flammable hydrogen gas.
AUTO IGNITION TEMPERATURE: N/A.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and miscellaneous organic compounds, some possibly toxic.

6. ACCIDENTAL RELEASE MEASURES

Make sure all personnel involved in the spill clean up follow good industrial hygiene practices. Wear alkali resistant slicker suit and complete protective equipment including rubber gloves, rubber boots and self-contained breathing apparatus in the pressure demand mode or a supplied air respirator.
FOR SMALL SPILLS: Mop up or wipe and dispose of in UN approved containers. Use absorbents, such as vermiculite, to remove any residue. Sweep up and place in an appropriate chemical waste container for disposal. Flush area with water.
FOR LARGE SPILLS: Dike and absorb spill with inert material such as vermiculite. Transfer to appropriate containers for disposal. Persons not wearing protective equipment should be excluded from area of spill until clean up has been completed. Stop spill at source. Dike area to prevent spreading. Do not flush to stream, river, sewer or other bodies of water.

7. HANDLING AND STORAGE

The recommendations described in this section are provided as general guidance for minimizing exposure when handling this product. Because use conditions will vary depending upon customer applications, specific safe handling procedures should be developed by a person knowledgeable of the intended use conditions and equipment. During the development of safe handling procedures, consideration should be given to the need for cleaning of equipment and piping systems to render them nonhazardous before maintenance and repair activities are performed.
ENGINEERING CONTROLS: When the need for engineering controls is indicated by the conditions under which the product is used, one or more of the following techniques may be selected to limit employee exposure: general ventilation, local exhaust ventilation, enclosure or confinement of the operation, and/or process isolation with remote control operation.
INGESTION: Open containers of food and beverages should be kept away from areas where the product is used or stored. Eating, drinking, smoking and application of cosmetics should be prohibited in areas where the product is being used. Before eating, hands and face should be washed to remove residual contamination.
SKIN CONTACT: Skin contact should be minimized through the use of gloves and suitable long sleeved clothing selected with regard for use condition exposure potential.
EYE CONTACT: Eye contact should be avoided through the use of chemical safety glasses, goggles or a face shield selected with regard for use condition exposure potential.
INHALATION: If the product is used under conditions, which generate airborne contamination, these processing operations should be carried out in open, well-ventilated areas, or in enclosed areas equipped with local exhaust ventilation. If adequate ventilation is not available, employees should be provided with appropriate, approved, air purifying or supplied air respirators selected in accordance with NIOSH guidelines.
EXPOSURE LIMITS: No exposure limit has been established for this material. Exposure limits for its hazardous components, if any, are listed in Section 2 on page one.
ADDITION INFORMATION: Store in a cool, dry, well-ventilated area. Keep away from heat, sparks and flame. Keep containers tightly closed when not in use, even when empty. Do not use pressure to empty container. Do not reuse container. Containers of this product may be hazardous when emptied. Since containers may hold product residues, i.e. vapor, liquid and/or solid, all hazard precautions given in this Material Safety Data Sheet must be observed.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION: If exposure limits are exceeded or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to most recent NIOSH publications concerning chemical hazards or consult your

safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSHA/MSHA approved positive pressure breathing apparatus should be readily available.
VENTILATION REQUIREMENTS: Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements. Local mechanical ventilation may be required.
EYE PROTECTION: Chemical goggles. Always wear eye protection when working with chemicals. Do not wear contact lenses when working with chemicals.
SKIN PROTECTION: Impervious gloves and clean body covering clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 212° F
VAPOR PRESSURE (MM Hg): ND
VAPOR DENSITY (AIR = 1): ND
SPECIFIC GRAVITY (H_2O = 1): 1.0067
DENSITY (G/ML): 8.4937
PERCENT VOLATILE BY VOLUME (%): 100% +/-1
MELTING POINT: N/A
EVAPORATION RATE (Butyl Acetate = 1): >1
SOLUBILITY IN WATER: Complete
pH: 11.33

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and miscellaneous organic compounds, some possibly toxic.
KEEP AWAY FROM: Inorganic bases and bleaching agents (oxidizers). Avoid contact with bleaching agents and oxidizers, which include chlorine, oxygen, permanganates, percarbonates, peroxides, chromates, hypochlorites, nitric acid and sulfuric acid. Avoid contact with amphoteric metals, which include aluminum, copper and zinc. Avoid heat, heated surfaces, static electricity, electric arcs, sparks and flames. Avoid contact with organic materials such as leather and wool.

11. TOXICOLOGICAL INFORMATION

EYE CONTACT: Vapors, liquids and mist are extremely corrosive to eyes. Brief contact of vapors will be extremely irritating. Brief contact of liquid or mist will cause severe damage and prolonged contact may cause permanent eye injury and even blindness.
SKIN CONTACT: Vapors, mist and liquid are extremely corrosive to skin. Vapors can irritate skin. Mist and liquid can burn skin. *Prolonged contact can destroy tissue. A latent period may exist between exposure and sense of irritation.*
INHALATION: Excessive inhalation of vapors and mists are extremely corrosive to nose, throat and mucous membranes. Can cause mild to severe irritation of respiratory tract. Bronchitis, pulmonary edema and chemical pneumonia may occur.
INGESTION: Although not expected in industrial use, vapors, mist and liquid are extremely corrosive to the mouth and throat. Can cause severe abdominal pain, nausea and vomiting.
ACUTE EFFECTS FROM OVEREXPOSURE: May aggravate disorders of the eyes, skin, blood, kidneys, liver and lungs.
CARCINOGEN STATUS: No components present in excess of 0.1% by weight are listed as carcinogens by IARC, NTP or OSHA.

There are no data available, which address medical conditions, which are generally recognized as being aggravated by exposure to this product.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: No information available.
ENVIRONMENTAL EFFECTS: No information available.

13. DISPOSAL CONSIDERATIONS

Material that cannot be used should be disposed of at an approved facility in accordance with any applicable regulations under the Resource Conservation and Recovery Act. NOTE: State and local regulations may be more stringent than Federal.

Dispose of empty containers according to any applicable regulations under the Resource Conservation and Recovery Act. NOTE: State and local regulations may be more stringent than Federal.

Empty containers may contain residual material. Do not reuse containers unless properly reconditioned.

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14. TRANSPORTATION INFORMATION

DOT SHIPPING NAME: Potassium Hydroxide Solution
DOT HAZARD CLASS: 8
UN/NA NUMBER: 1814
PACKING GROUP: III
PRODUCT RQ (lbs): None
DOT LABEL: Corrosive.
DOT PLACARD: Corrosive.

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15. REGULATORY INFORMATION

TSCA: This material or its components are listed on the TSCA Chemical Substance Inventory and is in compliance with all applicable rules and orders.

SARA: This material does not contain any substances on the list of Toxic Chemicals subject to Section 313 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III), in excess of the applicable de minimis concentrations as specified in Section 372.38(a).

RCRA Hazard Class: D002

This material or its components are listed on the Canadian Domestic Substance List (DSL).

CALIFORNIA PROPOSITION 65: This material does not contain any substances known to the State of California to cause cancer or reproductive effects.

MASSACHUSETTS SUBSTANCE LIST: This material contains the following listed components: Potassium hydroxide.

PENNSYLVANIA HAZARDOUS SUBSTANCE LIST: This material contains the following listed components: Potassium hydroxide.

NEW JERSEY R-T-K HAZARDOUS SUBSTANCE LIST: This material contains the following listed components: Potassium hydroxide.

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16. OTHER INFORMATION

HEALTH	FLAMMABILITY	REACTIVITY	SPECIAL HAZARD
1	0	1	ND

(Degree of hazard: 0 = No Hazard, 4 = Severe Hazard)

USERS RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER OF LIABILITY: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

N.E. = Not established; N/A = Not applicable/not available; ND = Not determined; TLV = Threshold Limit Value; PEL = Permissible Exposure Limit; OSHA = Occupational Safety and Health Administration; ACGIH = American Conference of Governmental Industrial Hygienists; ppm = Parts per million; TSCA = Toxic Substances Control Act; SARA = Superfund Amendments and Reauthorization Act; DOT = Department of Transportation